

# Radiation-emitting semiconductor component used as an illuminating diode or semiconductor laser comprises an active layer, a contact surface and a cylindrical semiconductor body

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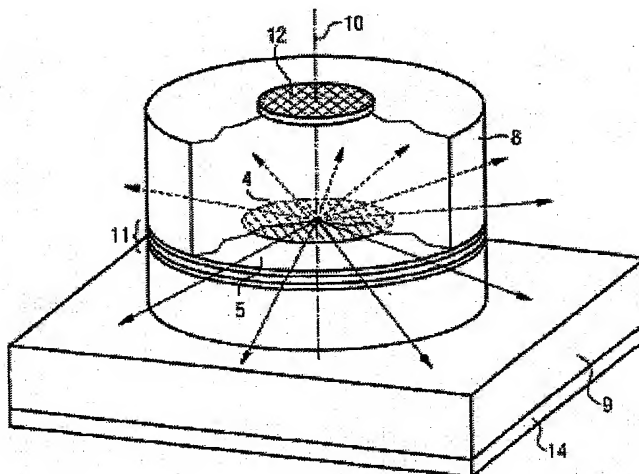
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## Abstract of DE10039435

Radiation-emitting semiconductor component comprises an active layer (11), a contact surface (12) and a cylindrical semiconductor body (8). The active layer is arranged vertically to the cylindrical axis (10) and the radiation generated during operation is emitted partially vertical to the cylindrical axis. During operation a first region (4) and a second region (5) are formed in the plane of the active layer so that radiation is only produced in the first region and the first region is surrounded by the second region. An independent claim is also included for a process for the production of the radiation-emitting semiconductor component comprising forming the active layer which extends over the cross-sectional surface of the semiconductor body, and mixing the parts of the active layer corresponding to the second region by diffusion or implantation so that no radiation is produced in the mixed region.

Preferred Features: The semiconductor body contains GaAs, AlGaAs, AlGaSb, AlGaAsPb, InGaAsP, InP or GaSb.



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